

Low Anterior Resection Syndrome – Treatment Possibilities

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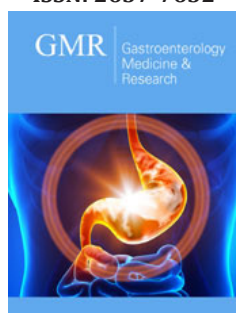
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Abstract

Purpose: Our purpose was to review the newest treatment possibilities of Low Anterior Resection Syndrome (LARS).

Methods: We have performed the narrative review of the newest literature and ongoing trials.

Results: There we discuss the possibilities of sacral neuromodulation, percutaneous tibial nerve stimulation.

Conclusion: Low anterior resection syndrome is a multifactorial condition with is very hard to treat. Best treatment option is preservation of rectum.

Keywords: Low anterior resection syndrome; LARS; Transanal irrigation; Sacral neuromodulation

Introduction

Rectal cancer treatment over past decades has evolved from abdominoperineal resection to sphincter saving Total Mesorectal Excision (TME) [1,2]. Radiotherapy with or without chemotherapy with surgery significantly improved the oncological outcomes. Ultralow or intrasphincteric resections leads to a high incidence of functional disorders, of them bowel dysfunction or so called Low Anterior Resection Syndrome (LARS) [3]. As survival improves, quality of life of survivals becomes a major issue and the target of European Commission [4].

As aetiology of LARS is multifactorial, the prevention and treatment possibilities are difficult and most of the time no single method is possible. There are plenty of recommendations for the prevention of LARS, namely, avoidance of low anastomosis in elderly patients or even a surgery in full responders after total neoadjuvant treatment [5], omission of neoadjuvant radiotherapy, seeing and preservation of the nerves while performing the surgery, performing J-pouch of side to end anastomosis, omitting the ileostomy or decreasing the length before the takedown. However, LARS still affects the majority of patients undergoing low anterior resection and what is more important – this is a long-term issue [6].

3.1. Available treatments for LARS

In this issue we will focus on possible treatments of LARS. Just recently public guidelines were issued [7]. Authors recommend conservative management as a first step. Even though there is little evidence that dietary modifications are effective for LARS patients, good results with reducing of non-soluble fiber intake seems reasonable. The use of anti-diarrheal agents such as loperamide if necessary, can also apply to LARS. The authors also recommend

patient consultation before any treatment initiation and risk of LARS assessment. Moreover, instruction of patients of starting the treatment just after the surgery with dietary modifications or medication habits according to their symptoms. Together with best supportive treatment pelvic floor muscle training with biofeedback may be advised.

If “conservative” treatments are not helpful, patients may be advised to use Transanal Irrigation (TAI), Sacral Neuromodulation (SNM), percutaneous tibial nerve stimulation. TAI seems a promising treatment modality. It has at least two benefits – first, as the bowel following irrigation is empty the patient will have pseudo continence, secondly – the bowel is “taught” to do the defecation movements at same time. Only a few randomized clinical trials are present comparing TAI vs best supportive treatment [8-10]. Main limitation of these trials are the small sample size and relatively short follow up. Another possibility is the SNM, which in small trials showed a great benefit to patients’ quality of life [11]. However, lack of control group, the retrospective nature of the studies included in the review made it difficult to draw definitive conclusions. Although the mechanism of SNM action is still not fully understood, but it seems to involve modulation of the spinal cord reflexes and brain networks by peripheral afferents according. Moreover, motor effects mediated via efferent on direct stimulation cannot be fully excluded. And finally, if nothing works, patient may be suggested the stoma formation.

Future Perspective

The best possible prevention of LARS is the preservation of rectum. This can be achieved by total neoadjuvant treatment or immunotherapy with the possible full response. Another field to develop is rehabilitation which could have an important role in preparing patients to life with neorectum. At least a few studies are under way (PRELARS – Clinicaltrials.gov NCT04612569, CONTICARE – Clinicaltrials.gov NCT03876561, POLARIS Clinicaltrials.gov NCT05319054, <https://classic.clinicaltrials.gov/ct2/show/NCT05319054>) exploring this new fields. Moreover, individualized treatments based on the assessment of concomitant urinary and sexual dysfunction after rectal resection, along with dominant bowel dysfunction should be advised in the future.

Statements and Declarations

Authors’ contributions

Audrius Dulskas, Peter Christensen and Michail Klimovskij conceptualised the study, whilst Tomas Aukstikalnis secured funding and study approval. Michail Klimovskij and Tomas Aukstikalnis collected the data. Audrius Dulskas, Michail Klimovskij and Peter Christensen drafted the manuscript. All co-authors reviewed and edited the manuscript text and approved the final version.

Conflicts of interest

The authors have no competing interests to declare that are relevant to the content of this article.

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Data availability statement

Not applicable.

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